DAIKIN

INSTALLATION MANUAL

Air-cooled condensing units

ERAP110MBYNN
ERAP150MBYNN
ERAP170MBYNN

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CE - KONFORMITÄTSERKLÄRUNG
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CE - IZJAVA O SKLADNOSTI
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CE - ДЕКЛАРАЦИЯ-ЗА-СЪОТВЕТСТВИЕ
CE - ATITIKTIES-DEKLARACIJA
CE - ATBILSTĪBAS-DEKLARĀCIJA
CE - VYHLÁSENIE-ZHODY
CE - UYUMLULUK-BİLDİRİSİ

Daikin Europe N.V.

01 (GB) declares under its sole responsibility that the air conditioning models to which this declaration relates:
02 (D) erklärt auf seine alleinige Verantwortung daß die Modelle der Klimageräte für die diese Erklärung bestimmt ist:
03 (F) déclare sous sa seule responsabilité que les appareils d'air conditionné visés par la présente déclaration:
04 (NL) verklaart hierbij op eigen exclusieve verantwoordelijkheid dat de airconditioning units waarop deze verklaring betrekking heeft:
05 (E) declara baja su única responsabilidad que los modelos de aire acondicionado a los cuales hace referencia la declaración:
06 (I) dichiara sotto sua responsabilità che i condizionatori modello a cui è riferita questa dichiarazione:
07 (GR) δηλώνει με αποκλειστική της ευθύνη ότι τα μοντέλα των κλιματιστικών συσκευών στα οποία αναφέρεται η παρούσα δήλωση:
08 (P) declara sob sua exclusiva responsabilidade que os modelos de ar condicionado a que esta declaração se refere:
09 (RUS) заявляет, исключительно под свою ответственность, что модели кондиционеров воздуха, к которым относится настоящее заявление:
10 (DK) erklærer under eneansvar, at klimaanlægmodellerne, som denne deklaration vedrører:
11 (S) deklarerar i egenskap av huvudansvarig, att luftkonditioneringsmodellerna som berörs av denna deklaration innebär att:
12 (N) erklærer et fullstendig ansvar for at de luftkondisjoneringsmodeller som berøres av denne deklarasjon innebærer at:
13 (FIN) ilmoittaa yksinomaan omalla vastuullaan, että tämän ilmoituksen tarkoittamat ilmastointilaitteiden mallit:
14 (CZ) prohlašuje ve své plné odpovědnosti, že modely klimatizace, k nimž se toto prohlášení vztahuje:
15 (HR) izjavljuje pod isključivo vlastitom odgovornošću da su modeli klima uređaja na koje se ova izjava odnosi:
16 (H) teljes felelőssége tudatában kijelenti, hogy a klímaberendezés modellek, melyekre e nyilatkozat vonatkozik:
17 (PL) deklaruje na własną i wyłączną odpowiedzialność, że modele klimatyzatorów, których dotyczy niniejsza deklaracja:
18 (RO) declară pe proprie răspundere că aparatele de aer condiţionat la care se referă această declaraţie:
19 (SLO) z vso odgovornostjo izjavlja, da so modeli klimatskih naprav, na katere se izjava nanaša:
20 (EST) kinnitab oma täielikul vastutusel, et käesoleva deklaratsiooni alla kuuluvad kliimaseadmete mudelid:
21 (BG) декларира на своя отговорност, че моделите климатична инсталация, за които се отнася тази декларация:
22 (LT) visiška savo atsakomybe skelbia, kad oro kondicionavimo prietaisų modeliai, kuriems yra taikoma ši deklaracija:
23 (LV) ar pilnu atbildību apliecina, ka tālāk uzskaitīto modeļu gaisa kondicionētāji, uz kuriem attiecas šī deklārācija:
24 (SK) vyhlasuje na vlastnú zodpovednosť, že tieto klimatizačné modely, na ktoré sa vzťahuje toto vyhlásenie:
25 (TR) tamamen kendi sorumluluğunda olmak üzere bu bildirinin ilgili olduğu klima modellerinin aşağıdaki gibi olduğunu beyan eder:

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* = , -, 0, 1, 2, 3, ..., 9, A, B, C, ..., Z

01 are in conformity with the following standard(s) or other normative document(s), provided that these are used in accordance with our instructions:
02 der/den folgenden Norm(en) oder einem anderen Normdokument oder -dokumenten entspricht/entsprechen, unter der Voraussetzung, daß sie gemäß unseren Anweisungen eingesetzt werden:
03 sont conformes à la/aux norme(s) ou autre(s) document(s) normatif(s), pour autant qu'ils soient utilisés conformément à nos instructions:
04 conform de volgende norm(en) of één of meer andere bindende documenten zijn, op voorwaarde dat ze worden gebruikt overeenkomstig onze instructies:
05 están en conformidad con la(s) siguiente(s) norma(s) u otro(s) documento(s) normativo(s), siempre que sean utilizados de acuerdo con nuestras instrucciones:
06 sono conformi al(i) seguente(i) standard(s) o altro(i) documento(i) a carattere normativo, a patto che vengano usati in conformità alle nostre istruzioni:
07 είναι σύμφωνα με το(α) ακόλουθο(α) πρότυπο(α) ή άλλο έγγραφο(α) κανονισμών, υπό την προϋπόθεση ότι χρησιμοποιούνται σύμφωνα με τις οδηγίες μας:
08 estão em conformidade com a(s) seguinte(s) norma(s) ou outro(s) documento(s) normativo(s), desde que estes sejam utilizados de acordo com as nossas instruções:
09 соответствуют следующим стандартам или другим нормативным документам, при условии их использования согласно нашим инструкциям:
10 overholder følgende standard(er) eller andet/andre retningsgivende dokument(er), forudsat at disse anvendes i henhold til vore instrukser:
11 respektive utrustning är utförd i överensstämmelse med och följer följande standard(er) eller andra normgivande dokument, under förutsättning att användning sker i överensstämmelse med våra instruktioner:
12 respektive utstyr er i overensstemmelse med følgende standard(er) eller andre normgivende dokument(er), under forutssetning av at disse brukes i henhold til våre instrukser:
13 vastaavat seuraavien standardien ja muiden ohjeellisten dokumenttien vaatimuksia edellyttäen, että niitä käytetään ohjeidemme mukaisesti:
14 za předpokladu, že jsou využívány v souladu s našimi pokyny, odpovídají následujícím normám nebo normativním dokumentům:
15 u skladu sa slijedećim standardom(ima) ili drugim normativnim dokumentom(ima), uz uvjet da se oni koriste u skladu s našim uputama:
16 megfelelnek az alábbi szabvány(ok)nak vagy egyéb irányadó dokumentum(ok)nak, ha azokat előírás szerint használják:
17 spełniają wymogi następujących norm i innych dokumentów normalizacyjnych, pod warunkiem że używane są zgodnie z naszymi instrukcjami:
18 sunt în conformitate cu următorul (următoarele) standard(e) sau alt(e) document(e) normativ(e), cu condiţia ca acestea să fie utilizate în conformitate cu instrucţiunile noastre:
19 skladni z naslednjimi standardi in drugimi normativi, pod pogojem, da se uporabljajo v skladu z našimi navodili:
20 on vastavuses järgmis(t)e standardi(te)ga või teiste normatiivsete dokumentidega, kui neid kasutatakse vastavalt meie juhenditele:
21 съответстват на следните стандарти или други нормативни документи, при условие, че се използват съгласно нашите инструкции:
22 atitinka žemiau nurodytus standartus ir (arba) kitus norminius dokumentus su sąlyga, kad yra naudojami pagal mūsų nurodymus:
23 tad, ja lietoti atbilstoši ražotāja norādījumiem, atbilst sekojošiem standartiem un citiem normatīviem dokumentiem:
24 sú v zhode s nasledovnou(ými) normou(ami) alebo iným(i) normatívnym(i) dokumentom(ami), za predpokladu, že sa používajú v súlade s našim návodom:
25 ürünün, talimatlarımıza göre kullanılması koşuluyla aşağıdaki standartlar ve norm belirten belgelerle uyumludur:

EN60335-2-40,

01 following the provisions of:
02 gemäß den Vorschriften der:
03 conformément aux stipulations des:
04 overeenkomstig de bepalingen van:
05 siguiendo las disposiciones de:
06 secondo le prescrizioni per:
07 με τήρηση των διατάξεων των:
08 de acordo com o previsto em:
09 в соответствии с положениями:
10 under iagttagelse af bestemmelserne i:
11 enligt villkoren i:
12 gitt i henhold til bestemmelsene i:
13 noudattaen määräyksiä:
14 za dodržení ustanovení předpisu:
15 prema odredbama:
16 követi a(z):
17 zgodnie z postanowieniami Dyrektyw:
18 în urma prevederilor:
19 ob upoštevanju določb:
20 vastavalt nõuetele:
21 следвайки клаузите на:
22 laikantis nuostatų, pateikiamų:
23 ievērojot prasības, kas noteiktas:
24 održiavajúc ustanovenia:
25 bunun koşullarına uygun olarak:

Low Voltage 2006/95/EC
Machinery 98/37/EC
Electromagnetic Compatibility 2004/108/EC *
Pressure Equipment 97/23/EC **

01 Directives, as amended.
02 Direktiven, gemäß Änderung.
03 Directives, telles que modifiées.
04 Richtlijnen, zoals geamendeerd.
05 Directivas, según lo enmendado.
06 Direttive, come da modifica.
07 Οδηγιών, όπως έχουν τροποποιηθεί.
08 Directivas, conforme alteração em.
09 Директив со всеми поправками.
10 Direktiver, med senere ændringer.
11 Direktiv, med företagna ändringar.
12 Direktiver, med foretatte endringer.
13 Direktiivejä, sellaisina kuin ne ovat muutettuina.
14 v platném znění.
15 Smjernice, kako je izmijenjeno.
16 irányelv(ek) és módosításaik rendelkezéseit.
17 z późniejszymi poprawkami.
18 Directivelor, cu amendamentele respective.
19 Direktive z vsemi spremembami.
20 Direktiivid koos muudatustega.
21 Директиви, с техните изменения.
22 Direktyvose su papildymais.
23 Direktīvās un to papildinājumos.
24 Smernice, v platnom znení.
25 Değiştirilmiş halleriyle Yönetmelikler.

01 *as set out in <A> and judged positively by <B> according to the **Certificate <C>**.
as set out in the Technical Construction File <D> and judged positively by <E> (Applied module <F>) according to the **Certificate <G>. Risk category <H>. Also refer to next page.
02 *wie in der <A> aufgeführt und von <B> positiv beurteilt gemäß **Zertifikat <C>**.
wie in der Technischen Konstruktionsakte <D> aufgeführt und von <E> (Angewandtes Modul <F>) positiv ausgezeichnet gemäß **Zertifikat <G>. Risikoart <H>. Siehe auch nächste Seite.
03 *tel que défini dans <A> et évalué positivement par <B> conformément au **Certificat <C>**.
tel que stipulé dans le Fichier de Construction Technique <D> et jugé positivement par <E> (Module appliqué <F>) conformément au **Certificat <G>. Catégorie de risque <H>. Se reporter également à la page suivante.
04 *zoals vermeld in <A> en positief beoordeeld door <B> overeenkomstig **Certificaat <C>**.
zoals vermeld in het Technisch Constructiedossier <D> en in orde bevonden door <E> (Toegepaste module <F>) overeenkomstig **Certificaat <G>. Risicocategorie <H>. Zie ook de volgende pagina.
05 *como se establece en <A> y es valorado positivamente por <B> de acuerdo con el **Certificado <C>**.
tal como se expone en el Archivo de Construcción Técnica <D> y juzgado positivamente por <E> (Modulo aplicado <F>) según el **Certificado <G>. Categoría de riesgo <H>. Consulte también la siguiente página.
06 *delineato nel <A> e giudicato positivamente da <B> secondo il **Certificato <C>**.
delineato nel File Tecnico di Costruzione <D> e giudicato positivamente da <E> (Modulo <F> applicato) secondo il **Certificato <G>. Categoria di rischio <H>. Fare riferimento anche alla pagina successiva.
07 *όπως καθορίζεται στο <A> και κρίνεται θετικά από το <B> σύμφωνα με το **Πιστοποιητικό <C>**.
όπως προσδιορίζεται στο Αρχείο Τεχνικής Κατασκευής <D> και κρίνεται θετικά από το <E> (Χρησιμοποιούμενη υπομονάδα <F>) σύμφωνα με το **Πιστοποιητικό <G>. Κατηγορία επικινδυνότητας <H>. Ανατρέξτε επίσης στην επόμενη σελίδα.
08 *tal como estabelecido em <A> e com o parecer positivo de <B> de acordo com o **Certificado <C>**.
tal como estabelecido no Ficheiro Técnico de Construção <D> e com o parecer positivo de <E> (Módulo aplicado <F>) de acordo com o **Certificado <G>. Categoria de risco <H>. Consultar também a página seguinte.
09 *как указано в <A> и в соответствии с положительным решением <B> согласно **Свидетельству <C>**.
как указано в Досье технического толкования <D> и в соответствии с положительным решением <E> (Прикладной модуль <F>) согласно **Свидетельству <G>. Категория риска <H>. Также смотрите следующую страницу.
10 *som anført i <A> og positivt vurderet af <B> i henhold til **Certifikat <C>**.
som anført i den Tekniske Konstruktionsfil <D> og positivt vurderet af <E> (Anvendt modul <F>) i henhold til **Certifikat <G>. Risikoklasse <H>. Se også næste side.
11 *enligt <A> och godkänts av <B> enligt **Certifikatet <C>**.
i enlighet med den Tekniska Konstruktionsfilen <D> som positivt intygats av <E> (Fastsatt modul <F>) vilket också framgår av **Certifikat <G>. Riskkategori <H>. Se även nästa sida.
12 *som det fremkommer i <A> og gjennom positiv bedømmelse av <B> ifølge **Sertifikat <C>**.
som det fremkommer i den Tekniske Konstruksjonsfilen <D> og gjennom positiv bedømmelse av <E> (Anvendt modul <F>) ifølge **Sertifikat <G>. Risikokategori <H>. Se også neste side.
13 *jotka on esitetty asiakirjassa <A> ja jotka <B> on hyväksynyt **Sertifikaatin <C>** mukaisesti.
jotka on esitetty Teknisessä Asiakirjassa <D> ja jotka <E> on hyväksynyt (Sovellettu moduli <F>) **Sertifikaatin <G> mukaisesti. Vaaraluokka <H>. Katso myös seuraava sivu.
14 *jak bylo uvedeno v <A> a pozitivně zjištěno <B> v souladu s **osvědčením <C>**.
jak bylo uvedeno v souboru technické konstrukce <D> a pozitivně zjištěno <E> (použitý modul <F>) v souladu s **osvědčením <G>. Kategorie rizik <H>. Viz také následující strana.
15 *kako je izloženo u <A> i pozitivno ocijenjeno od strane <B> prema **Certifikatu <C>**.
kako je izloženo u Datoteci o tehničkoj konstrukciji <D> i pozitivno ocijenjeno od strane <E> (Primijenjen modul <F>) prema **Certifikatu <G>. Kategorija opasnosti <H>. Također pogledajte na slijedećoj stranici.
16 *a(z) <A> alapján, a(z) <B> igazolta a megfelelést, a(z) <C> **tanúsítvány** szerint.
a(z) <D> műszaki konstrukciós dokumentáció alapján, a(z) <E> igazolta a megfelelést (alkalmazott modul: <F>), a(z) <G> **tanúsítvány szerint. Veszélyességi kategória <H>. Lásd még a következő oldalon.
17 *zgodnie z dokumentacją <A>, pozytywną opinią <B> i **Świadectwem <C>**.
zgodnie z archiwalną dokumentacją konstrukcyjną <D> i pozytywną opinią <E> (Zastosowany moduł <F>) zgodnie ze **Świadectwem <G>. Kategoria zagrożenia <H>. Patrz także następna strona.
18 *aşa cum este stabilit în <A> şi apreciat pozitiv de <B> în conformitate cu **Certificatul <C>**.
conform celor stabilite în Dosarul tehnic de construcţie <D> şi apreciate pozitiv de <E> (Modul aplicat <F>) în conformitate cu **Certificatul <G>. Categorie de risc <H>. Consultaţi de asemenea pagina următoare.
19 *kot je določeno v <A> in odobreno s strani <B> v skladu s **certifikatom <C>**.
kot je določeno v tehnični mapi <D> in odobreno s strani <E> (Uporabljen modul <F>) v skladu s **certifikatom <G>. Kategorija tveganja <H>. Glejte tudi na naslednji strani.
20 *nagu on näidatud dokumendis <A> ja heaks kiidetud <B> järgi vastavalt **sertifikaadile <C>**.
nagu on näidatud tehnilises dokumentatsioonis <D> ja heaks kiidetud <E> järgi (lisamoodul <F>) vastavalt **sertifikaadile <G>. Riskikategooria <H>. Vaadake ka järgmist lehekülge.
21 *както е изложено в <A> и оценено положително от <B> съгласно **Сертификата <C>**.
както е заложено в Акта за техническа конструкция <D> и оценено положително от <E> (Приложен модул <F>) съгласно **Сертификат <G>. Категория риск <H>. Вижте също на следващата страница.
22 *kaip nustatyta <A> ir kaip teigiamai nuspręsta <B> pagal **Sertifikatą <C>**.
kaip nurodyta Techninėje konstrukcijos byloje <D> ir patvirtinta <E> (taikomas modulis <F>) pagal **pažymėjimą <G>. Rizikos kategorija <H>. Taip pat žiūrėkite ir kitą puslapį.
23 *kā norādīts <A> un atbilstoši <B> pozitīvajam vērtējumam saskaņā ar **sertifikātu <C>**.
kā noteikts tehniskajā dokumentācijā <D>, atbilstoši <E> pozitīvajam lēmumam (piekritīgā sadaļa: <F>), ko apliecina **sertifikāts <G>. Riska kategorija <H>. Skat. arī nākošo lappusi.
24 *ako bolo uvedené v <A> a pozitívne zistené <B> v súlade s **osvedčením <C>**.
ako je to stanovené v Súbore technickej konštrukcie <D> a kladne posúdené <E> (Aplikovaný modul <F>) podľa **Certifikátu <G>. Kategória nebezpečia <H>. Viď tiež nasledovnú stranu.
25 *<A>'da belirtildiği gibi ve <C> **Sertifikasına** göre <B> tarafından olumlu olarak değerlendirildiği gibi.
** <D> Teknik Yapı Dosyasında belirtildiği gibi ve <G> **Sertifikasına** göre <E> tarafından olumlu olarak (Uygulanan modül <F>) değerlendirilmişti. Risk kategorisi <H>. Ayrıca bir sonraki sayfaya bakın.

<A>	DAIKIN.TCF.013F1/07-2007
<B>	KEMA
<C>	71801-KRQ/ECM97-4240
<D>	Daikin.TCFP.005
<E>	AIB Vinçotte (NB0026)
<F>	B1 + D
<G>	52846/08/02/01
<H>	III

2PW37336-6F

DAIKIN

Jiro Tomita
Director Quality Assurance
Ostend, 1st of February 2008

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Zandvoordestraat 300, B-8400 Oostende, Belgium

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01 (GB) continuation of previous page:
02 (D) Fortsetzung der vorherigen Seite:
03 (F) suite de la page précédente:
04 (NL) vervolg van vorige pagina:
05 (E) continuación de la página anterior:
06 (I) continua dalla pagina precedente:
07 (GR) συνέχεια από την προηγούμενη σελίδα:
08 (P) continuação da página anterior:
09 (RUS) продолжение предыдущей страницы:
10 (DK) fortsat fra forrige side:
11 (S) fortsättning från föregående sida:
12 (N) fortsettelse fra forrige side:
13 (FIN) jatkoa edelliseltä sivulta:
14 (CZ) pokračování z předchozí strany:
15 (HR) nastavak s prethodne stranice:
16 (H) folytatás az előző oldalról:
17 (PL) ciąg dalszy z poprzedniej strony:
18 (RO) continuarea paginii anterioare:
19 (SLO) nadaljevanje s prejšnje strani:
20 (EST) eelmise lehekülje järg:
21 (BG) продължение от предходната страница:
22 (LT) ankstesnio puslapio tęsinys:
23 (LV) iepriekšējās lappuses turpinājums:
24 (SK) pokračovanie z predchádzajúcej strany:
25 (TR) önceki sayfadan devam

01 Design Specifications of the models to which this declaration relates:
02 Konstruktionsdaten der Modelle auf die sich diese Erklärung bezieht:
03 Spécifications de conception des modèles auxquels se rapporte cette déclaration:
04 Ontwerpspecificaties van de modellen waarop deze verklaring betrekking heeft:
05 Especificaciones de diseño de los modelos a los cuales hace referencia esta declaración:
06 Specifiche di progetto dei modelli cui fa riferimento la presente dichiarazione:
07 Προδιαγραφές Σχεδιασμού των μοντέλων με τα οποία σχετίζεται η δήλωση:
08 Especificações de projecto dos modelos a que se aplica esta declaração:
09 Проектные характеристики моделей, к которым относится настоящее заявление:
10 Typespecifikationer for de modeller, som denne erklæring vedrører:
11 Designspecifikationer för de modeller som denna deklaration gäller:
12 Konstruksjonsspesifikasjoner for de modeller som berøres av denne deklarasjonen:
13 Tätä ilmoitusta koskevien mallien rakennemäärittely:
14 Specifikace designu modelů, ke kterým se vztahuje toto prohlášení:
15 Specifikacije dizajna za modele na koje se ova izjava odnosi:
16 A jelen nyilatkozat tárgyát képező modellek tervezési jellemzői:
17 Specyfikacje konstrukcyjne modeli, których dotyczy deklaracja:
18 Specificaţiile de proiectare ale modelelor la care se referă această declaraţie:
19 Specifikacije tehničnega načrta za modele, na katere se nanaša ta deklaracija:
20 Deklaratsiooni alla kuuluvate mudelite disainispetsifikatsioonid:
21 Проектни спецификации на моделите, за които се отнася декларацията:
22 Konstrukcinės specifikacijos modelių, kurie susiję su šia deklaracija:
23 To modeļu dizaina specifikācijas, uz kurām attiecas šī deklarācija:
24 Konštrukčné špecifikácie modelu, ktorého sa týka toto vyhlásenie:
25 Bu bildirinin ilgili olduğu modellerin Tasarım Özellikleri:

01 • Maximum allowable pressure (PS): <K> (bar)
• Minimum/maximum allowable temperature (TS*):
* TSmin: Minimum temperature at low pressure side: <L> (°C)
* TSmax: Saturated temperature corresponding with the maximum allowable pressure (PS): <M> (°C)
• Refrigerant: <N>
• Setting of pressure safety device: <P> (bar)
• Manufacturing number and manufacturing year: refer to model nameplate

02 • Maximal zulässiger Druck (PS): <K> (Bar)
• Minimal/maximal zulässige Temperatur (TS*):
* TSmin: Mindesttemperatur auf der Niederdruckseite: <L> (°C)
* TSmax: Sättigungstemperatur die dem maximal zulässigen Druck (PS) entspricht: <M> (°C)
• Kältemittel: <N>
• Einstellung der Druck-Schutzvorrichtung: <P> (Bar)
• Herstellungsnummer und Herstellungsjahr: siehe Typenschild des Modells

03 • Pression maximale admise (PS): <K> (bar)
• Température minimum/maximum admise (TS*):
* TSmin: température minimum côté basse pression: <L> (°C)
* TSmax: température saturée correspondant à la pression maximale admise: <M> (°C)
• Réfrigérant: <N>
• Réglage du dispositif de sécurité de pression: <P> (bar)
• Numéro de fabrication et année de fabrication: se reporter à la plaquette signalétique du modèle

04 • Maximaal toelaatbare druk (PS): <K> (bar)
• Minimaal/maximaal toelaatbare temperatuur (TS*):
* TSmin: Minimumtemperatuur aan lagedrukzijde: <L> (°C)
* TSmax: Verzadigde temperatuur die overeenstemt met de maximaal toelaatbare druk (PS): <M> (°C)
• Koelmiddel: <N>
• Instelling van drukbeveiliging: <P> (bar)
• Fabricagenummer en fabricagejaar: zie naamplaat model

05 • Presión máxima admisible (PS): <K> (bar)
• Temperatura mínima/máxima admisible (TS*):
* TSmin: Temperatura mínima en el lado de baja presión: <L> (°C)
* TSmax: Temperatura saturada correspondiente a la presión máxima admisible: <M> (°C)
• Refrigerante: <N>
• Ajuste del presostato de seguridad: <P> (bar)
• Número de fabricación y año de fabricación: consulte la placa de especificaciones técnicas del modelo

06 • Pressione massima consentita (PS): <K> (bar)
• Temperatura minima/massima consentita (TS*):
* TSmin: temperatura minima nel lato di bassa pressione: <L> (°C)
* TSmax: temperatura satura corrispondente alla pressione massima consentita (PS): <M> (°C)
• Refrigerante: <N>
• Impostazione del dispositivo di controllo della pressione: <P> (bar)
• Numero di serie e anno di produzione: fare riferimento alla targhetta del modello

07 • Μέγιστη επιτρεπόμενη πίεση (PS): <K> (bar)
• Ελάχιστη/μέγιστη επιτρεπόμενη θερμοκρασία (TS*):
* TSmin: Ελάχιστη θερμοκρασία για την πλευρά χαμηλής πίεσης: <L> (°C)
* TSmax: Κορεσμένη θερμοκρασία που αντιστοιχεί με τη μέγιστη επιτρεπόμενη πίεση (PS): <M> (°C)
• Ψυκτικό: <N>
• Ρύθμιση της διάταξης ασφάλειας πίεσης: <P> (bar)
• Αριθμός κατασκευής και έτος κατασκευής: ανατρέξτε στην πινακίδα αναγνώρισης του μοντέλου

08 • Pressão máxima permitida (PS): <K> (bar)
• Temperaturas mínima e máxima permitidas (TS*):
* TSmin: Temperatura mínima em baixa pressão: <L> (°C)
* TSmax: Temperatura de saturação correspondente à pressão máxima permitida (PS): <M> (°C)
• Refrigerante: <N>
• Regulação do dispositivo de segurança da pressão: <P> (bar)
• Número e ano de fabrico: consultar a placa de especificações da unidade

09 • Максимально допустимое давление (PS): <K> (бар)
• Минимально/максимально допустимая температура (TS*):
* TSmin: Минимальная температура на стороне низкого давления: <L> (°C)
* TSmax: Температура кипения, соответствующая максимально допустимому давлению (PS): <M> (°C)
• Хладагент: <N>
• Настройка устройства защиты по давлению: <P> (бар)
• Заводской номер и год изготовления: смотрите паспортную табличку модели

10 • Maks. tilladt tryk (PS): <K> (bar)
• Min./maks. tilladte temperatur (TS*):
* TSmin: Min. temperatur på lavtrykssiden: <L> (°C)
* TSmax: Mættet temperatur svarende til maks. tilladte tryk (PS): <M> (°C)
• Kølemiddel: <N>
• Indstilling af tryksikringsudstyr: <P> (bar)
• Produktionsnummer og fremstillingsår: se modellens fabriksskilt

11 • Maximalt tillåtet tryck (PS): <K> (bar)
• Min/max tillåten temperatur (TS*):
* TSmin: Minimumtemperatur på lågtryckssidan: <L> (°C)
* TSmax: Mättnadstemperatur som motsvarar maximalt tillåtet tryck (PS): <M> (°C)
• Köldmedel: <N>
• Inställning för trycksäkerhetsenhet: <P> (bar)
• Tillverkningsnummer och tillverkningsår: se modellens namnplåt

12 • Maksimalt tillatt trykk (PS): <K> (bar)
• Minimalt/maksimalt tillatt temperatur (TS*):
* TSmin: Minimumstemperatur på lavtrykksiden: <L> (°C)
* TSmax: Metningstemperatur i samsvar med maksimalt tillatt trykk (PS): <M> (°C)
• Kjølemedium: <N>
• Innstilling av sikkerhetsanordning for trykk: <P> (bar)
• Produksjonsnummer og produksjonsår: se modellens merkeplate

13 • Suurin sallittu paine (PS): <K> (bar)
• Pienin/suurin sallittu lämpötila (TS*):
* TSmin: Alhaisin matalapainepuolen lämpötila: <L> (°C)
* TSmax: Suurinta sallittua painetta (PS) vastaava kyllästyslämpötila: <M> (°C)
• Kylmäaine: <N>
• Varmuuspainelaitteen asetus: <P> (bar)
• Valmistusnumero ja valmistusvuosi: katso mallin nimikilpi

14 • Maximální přípustný tlak (PS): <K> (bar)
• Minimální/maximální přípustná teplota (TS*):
* TSmin: Minimální teplota na nízkotlaké straně: <L> (°C)
* TSmax: Saturovaná teplota odpovídající maximálnímu přípustnému tlaku (PS): <M> (°C)
• Chladivo: <N>
• Nastavení bezpečnostního tlakového zařízení: <P> (bar)
• Výrobní číslo a rok výroby: viz typový štítek modelu

15 • Najveći dopušten tlak (PS): <K> (bar)
• Najniža/najviša dopuštena temperatura (TS*):
* TSmin: Najniža temperatura u području niskog tlaka: <L> (°C)
* TSmax: Standardna temperatura koja odgovara najvećem dopuštenom tlaku (PS): <M> (°C)
• Rashladno sredstvo: <N>
• Postavke sigurnosne naprave za tlak: <P> (bar)
• Proizvodni broj i godina proizvodnje: pogledajte natpisnu pločicu modela

16 • Legnagyobb megengedhető nyomás (PS): <K> (bar)
• Legkisebb/legnagyobb megengedhető hőmérséklet (TS*):
* TSmin: Legkisebb megengedhető hőmérséklet a kis nyomású oldalon: <L> (°C)
* TSmax: A legnagyobb megengedhető nyomásnak (PS) megfelelő telítettségi hőmérséklet (PS): <M> (°C)
• Hűtőközeg: <N>
• A túlnyomás-kapcsoló beállítása: <P> (bar)
• Gyártási szám és gyártási év: lásd a berendezés adattábláján

17 • Maksymalne dopuszczalne ciśnienie (PS): <K> (bar)
• Minimalna/maksymalna dopuszczalna temperatura (TS*):
* TSmin: Minimalna temperatura po stronie niskociśnieniowej: <L> (°C)
* TSmax: Temperatura nasycenia odpowiadająca maksymalnemu dopuszczalnemu ciśnieniu (PS): <M> (°C)
• Czynnik chłodniczy: <N>
• Nastawa ciśnieniowego urządzenia bezpieczeństwa: <P> (bar)
• Numer fabryczny oraz rok produkcji: patrz tabliczka znamionowa modelu

18 • Presiune maximă admisibilă (PS): <K> (bar)
• Temperatură minimă/maximă admisibilă (TS*):
* TSmin: Temperatură minimă pe partea de presiune joasă: <L> (°C)
* TSmax: Temperatura de saturaţie corespunzând presiunii maxime admisibile (PS): <M> (°C)
• Agent frigorific: <N>
• Reglarea dispozitivului de siguranţă pentru presiune: <P> (bar)
• Numărul de fabricaţie şi anul de fabricaţie: consultaţi placa de identificare a modelului

19 • Maksimalni dovoljeni tlak (PS): <K> (bar)
• Minimalna/maksimalna dovoljena temperatura (TS*):
* TSmin: Minimalna temperatura na nizkotlačni strani: <L> (°C)
* TSmax: Nasičena temperatura, ki ustreza maksimalnemu dovoljenemu tlaku (PS): <M> (°C)
• Hladivo: <N>
• Nastavljanje varnostne naprave za tlak: <P> (bar)
• Tovarniška številka in leto proizvodnje: glejte napisno ploščico

20 • Maksimaalne lubatud surve (PS): <K> (bar)
• Minimaalne/maksimaalne lubatud temperatuur (TS*):
* TSmin: Minimaalne temperatuur madalsurve küljel: <L> (°C)
* TSmax: Maksimaalsele lubatud survele (PS) vastav küllastunud temperatuur (PS): <M> (°C)
• Jahutusaine: <N>
• Surve turvaseadme seadistus: <P> (bar)
• Tootmisnumber ja tootmisaasta: vaadake mudeli andmeplaati

21 • Максимално допустимо налягане (PS): <K> (bar)
• Минимално/максимално допустима температура (TS*):
* TSmin: Минимална температура от страната на ниското налягане: <L> (°C)
* TSmax: Температура на насищане, съответстваща на максимално допустимото налягане (PS): <M> (°C)
• Охладител: <N>
• Настройка на предпазното устройство за налягане: <P> (bar)
• Фабричен номер и година на производство: вижте табелката на модела

22 • Maksimalus leistinas slėgis (PS): <K> (bar)
• Minimali/maksimali leistina temperatūra (TS*):
* TSmin: Minimali temperatūra žemo slėgio pusėje: <L> (°C)
* TSmax: Prisotinta temperatūra, atitinkamti maksimalų leistiną slėgį (PS): <M> (°C)
• Šaldymo skystis: <N>
• Apsauginio slėgio prietaiso nustatymas: <P> (bar)
• Gaminio numeris ir pagaminimo metai: žiūrėkite modelio pavadinimo plokštelę

23 • Maksimālais pieļaujamais spiediens (PS): <K> (bar)
• Minimālā/maksimālā pieļaujamā temperatūra (TS*):
* TSmin: Minimālā temperatūra zemā spiediena pusē: <L> (°C)
* TSmax: Piesātinātā temperatūra saskaņā ar maksimālo pieļaujamo spiedienu (PS): <M> (°C)
• Dzesinātājs: <N>
• Spiediena drošības ierīces iestatīšana: <P> (bar)
• Izgatavošanas numurs un izgatavošanas gads: skat. modeļa izgatavotājuzņēmuma plāksnīte

24 • Maximálny povolený tlak (PS): <K> (bar)
• Minimálna/maximálna povolená teplota (TS*):
* TSmin: Minimálna teplota na nízkotlakovej strane: <L> (°C)
* TSmax: Nasýtená teplota korešpondujúca s maximálnym povoleným tlakom (PS): <M> (°C)
• Chladivo: <N>
• Nastavenie tlakového poistného zariadenia: <P> (bar)
• Výrobné číslo a rok výroby: nájdete na výrobnom štítku modelu

25 • İzin verilen maksimum basınç (PS): <K> (bar)
• İzin verilen minimum/maksimum sıcaklık (TS*):
* TSmin: Düşük basınç tarafındaki minimum sıcaklık: <L> (°C)
* TSmax: İzin verilen maksimum basınca (PS) karşı gelen doyma sıcaklığı (PS): <M> (°C)
• Soğutucu: <N>
• Basınç emniyet düzeninin ayarı: <P> (bar)
• İmalat numarası ve imalat yılı: modelin ünite plakasına bakın

<K>	PS	29	bar
<L>	TSmin	–33	°C
<M>	TSmax	68	°C
<N>		R407C	
<P>		26.1	bar

01 Name and address of the Notified body that judged positively on compliance with the Pressure Equipment Directive: <Q>
02 Name und Adresse der benannten Stelle, die positiv unter Einhaltung der Druckanlagen-Richtlinie urteilte: <Q>
03 Nom et adresse de l'organisme notifié qui a évalué positivement la conformité à la directive sur l'équipement de pression: <Q>
04 Naam en adres van de aangemelde instantie die positief geoordeeld heeft over de conformiteit met de Richtlijn Drukapparatuur: <Q>
05 Nombre y dirección del Organismo Notificado que juzgó positivamente el cumplimiento con la Directiva en materia de Equipos de Presión: <Q>
06 Nome e indirizzo dell'Ente riconosciuto che ha riscontrato la conformità alla Direttiva sulle apparecchiature a pressione: <Q>
07 Όνομα και διεύθυνση του Κοινοποιημένου οργανισμού που αποφάνθη θετικά για τη συμμόρφωση προς την Οδηγία Εξοπλισμών υπό Πίεση: <Q>
08 Nome e morada do organismo notificado, que avaliou favoravelmente a conformidade com a directiva sobre equipamentos pressurizados: <Q>
09 Название и адрес органа технической экспертизы, принявшего положительное решение о соответствии Директиве об оборудовании под давлением: <Q>
10 Navn og adresse på bemyndiget organ, der har foretaget en positiv bedømmelse af, at udstyret lever op til kravene i PED (Direktiv for Trykbærende Udstyr): <Q>
11 Namn och adress för det anmälda organ som godkänt uppfyllandet av tryckutrustningsdirektivet: <Q>
12 Navn på og adresse til det autoriserte organet som positivt bedømte samsvar med direktivet for trykkutstyr (Pressure Equipment Directive): <Q>
13 Sen ilmoitetun elimen nimi ja osoite, joka teki myönteisen päätöksen painelaitedirektiivin noudattamisesta: <Q>
14 Název a adresa informovaného orgánu, který vydal pozitivní posouzení shody se směrnicí o tlakových zařízeních: <Q>
15 Naziv i adresa prijavljenog tijela koje je donijelo pozitivnu prosudbu o usklađenosti sa Smjernicom za tlačnu opremu: <Q>
16 A nyomástartó berendezésekre vonatkozó irányelvnek való megfelelőséget igazoló bejelentett szervezet neve és címe: <Q>
17 Nazwa i adres Jednostki notyfikowanej, która wydała pozytywną opinię dotyczącą spełniania wymogów Dyrektywy dot. Urządzeń Ciśnieniowych: <Q>
18 Denumirea şi adresa organismului notificat care a apreciat pozitiv conformarea cu Directiva privind echipamentele sub presiune: <Q>
19 Ime in naslov organa za ugotavljanje skladnosti, ki je pozitivno ocenil združljivost z Direktivo o tlačni opremi: <Q>
20 Teavitatud organi, mis hindas Surveseadmete Direktiiviga ühilduvust positiivselt, nimi ja aadress: <Q>
21 Наименование и адрес на упълномощения орган, който се е произнесъл положително относно съвместимостта с Директивата за оборудване под налягане: <Q>
22 Atsakingos institucijos, kuri davė teigiamą sprendimą pagal slėginės įrangos direktyvą pavadinimas ir adresas: <Q>
23 Sertifikācijas institūcijas, kura ir devusi pozitīvu slēdzienu par atbilstību Spiediena lekārtu Direktīvai, nosaukums un adrese: <Q>
24 Názov a adresa certifikačného úradu, ktorý kladne posúdil zhodu so smernicou pre tlakové zariadenia: <Q>
25 Basınçlı Teçhizat Direktifine uygunluk hususunda olumlu olarak değerlendirilen Onaylanmış kuruluşun adı ve adresi: <Q>

<Q>	**AIB VINÇOTTE INTERNATIONAL** **Avenue du Roi 157** **B-1190 Brussels, Belgium**

DAIKIN

Jiro Tomita
Director Quality Assurance
Ostend, 1st of February 2008

DAIKIN EUROPE N.V.
Zandvoordestraat 300, B-8400 Oostende, Belgium

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Thank you for purchasing this Daikin air conditioner.

READ THIS MANUAL ATTENTIVELY BEFORE STARTING UP THE UNIT. DO NOT THROW IT AWAY. KEEP IT IN YOUR FILES FOR FUTURE REFERENCE.

IMPROPER INSTALLATION OR ATTACHMENT OF EQUIPMENT OR ACCESSORIES COULD RESULT IN ELECTRIC SHOCK, SHORT-CIRCUIT, LEAKS, FIRE OR OTHER DAMAGE TO THE EQUIPMENT. BE SURE ONLY TO USE ACCESSORIES MADE BY DAIKIN WHICH ARE SPECIFICALLY DESIGNED FOR USE WITH THE EQUIPMENT AND HAVE THEM INSTALLED BY A PROFESSIONAL.

IF UNSURE OF INSTALLATION PROCEDURES OR USE, ALWAYS CONTACT YOUR DAIKIN DEALER FOR ADVICE AND INFORMATION.

INTRODUCTION

The Daikin ERAP110~170MBYNN air-cooled condensing units are designed for outdoor installation and used for cooling applications only. The units are available in 3 standard sizes with nominal cooling capacities of 100, 135 and 160 kW.

The present installation manual describes the procedures for unpacking, installing and connecting the ERAP units.

Technical specifications[(1)]

Model ERAP		110	150	170
Dimensions HxWxD	(mm)		2160x2340x2238	
Weight	(kg)	1326	1440	1516
Connections:				
- liquid line	(inch)		7/8"	
- suction line	(mm)		2-1/8"	
- pressure relief valveoutlet	(inch)		FNPT 1"	

Electrical specifications[(1)]

Model ERAP		110	150	170
Power circuit				
- Phase			3~	
- Frequency	(Hz)		50	
- Voltage	(V)		400	
- Voltage tolerance	(%)		±10	

Options and features[(1)]

Options

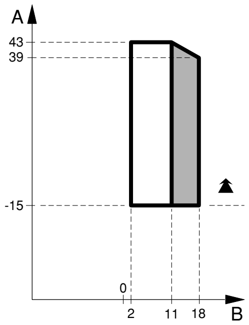
- Suction stop valve
- Ampere and voltmeter
- Main isolator switch
- Dual pressure relief valve on the condenser
- Low noise operation
- Condenser protection grills
- BMS Connection (MODBUS/J-BUS, BACNET, LON)

Features

- Stepless capacity control (30%~100%)
- Low ambient operation (–15°C)
- Liquid line solenoid valve
- Voltage free contacts
  - general operation/pump or fan contact
  - alarm
  - operation circuit
- Changeable voltage free contacts
  - 100% unit signal
  - second evaporator pump
- Remote input
  - interlock contacts for e.g. water or airflow
- Changeable remote inputs
  - remote start/stop
  - enable/disable capacity limitation[(2)]
- Multiple language selection
- Schedule timer

(1) Refer to the operation manual or engineering data book for the complete list of specifications, options and features.
(2) Can be used for night set back and/or peak power limitation: A kWh-gauge is connected to a voltage free contact. If the contact is enabled,the circuit will be limited to a preset capacity step.

Operation range



A	Outdoor temperature (°C DB)
B	Evaporating temperature (°C) (Suction dew point)
▭	Standard operation range
▲	Standard
▒	Range for pull down operation

Main components (refer to the outlook diagram supplied with the unit)

1	Condenser
2	Compressor 1 (M1C) with pressure relief valve
3	Discharge stopvalve
4	Liquid stopvalve
5	Suction stopvalve
6	Suction line
7	Liquid line
8	Drier + charge valve
9	Power supply intake
10	Emergency stop (S5E)
11	Switchbox
12	Digital display controller
13	Transportbeam
14	Ambient temperature sensor (R5T)
15	Field wiring intake
16	Main isolator switch (optional - S13S)

Selection of location

This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

The equipment is not intended for use in a potentially explosive atmosphere.

The units are designed either for roof mounting or ground level mounting and should be installed in a location that meets the following requirements:

1 The foundation is strong enough to support the weight of the unit and the floor is flat to prevent vibration and noise generation.

2 The space around the unit is adequate for servicing and the minimum space for air inlet and air outlet (refer to the operation manual) is available.

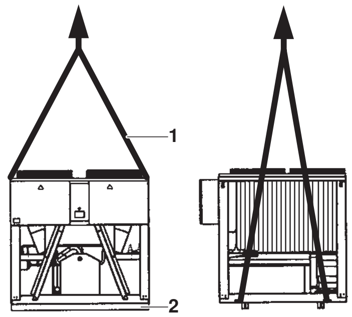
3 There is no danger of fire due to leakage of inflammable gas.

4 Select the location of the unit in such a way that neither the discharged air nor the sound generated by the unit disturb anyone.

5 Make sure that the air inlet and outlet of the unit are not positioned towards the main wind direction. Frontal wind will disturb the operation of the unit. If necessary, use a windscreen to block the wind.

Inspecting and handling the unit

At delivery, the unit should be checked and any damage should be reported immediately to the carrier claims agent.



When handling the unit, take into account the following:

1 Lift the unit preferably with a crane and belts in accordance with the instructions on the unit. The length of the ropes (1) to be used for lifting are 6 m minimum each.

2 The unit is shipped with wooden beams (2) under it, these have to be removed before installation.

NOTE Try to reduce the drilling in the unit to a minimum. If drilling is impreventable, remove the iron filling thoroughly in order to prevent surface rust!

Unpacking and placing the unit

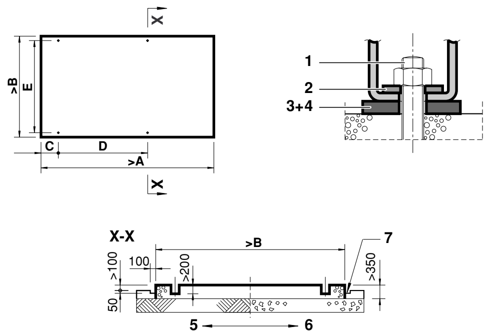
1 Remove the wooden beams from the unit.

2 Install vibration mountings in case of a roofmounted unit or other installation where noise and vibration might be an impediment.

3 Set the unit on a solid and level foundation.

Roof mounted:	The unit should be installed on steelchannel or I-beam frame to support the unit on the roof, or it can be installed on a concrete base.
Ground level mounted:	The unit should be installed on a solid base. It is recommended to fix the unit on a concrete base with anchor bolts.

Ground level mounting:



- The concrete foundation should approximately be 100 mm higher than the floor level for ease of plumbing work and better drain.

						Anchor bolt	
Model	**A**	**B**	**C**	**D**	**E**	**size**	**Qty**
ERAP110	3000	2210	410	1215	2125	M16X200	4
ERAP150	3000	2210	410	1215	2125	M16X200	4
ERAP170	3000	2210	410	1215	2125	M16X200	4

- Make certain that the foundation surface is even and flat.
- Fix anchor bolts (1) into the concrete foundation.
  When finally fixing the unit by means of these anchor bolts, make sure that the washers for channel DIN434 (2), and both field supplied rubber plates (3) and field supplied raw cork or rubber sheets (4) for better vibration protection, are installed as indicated.

NOTE

- The measurement tabulated is based on the fact the base is made in the ground (5) or on a concrete floor (6). In case the base is made on a rigid floor, it is possible to include thickness of concrete floor in that of the base.
- Ingredient ratio of the concrete is: cement 1, sand 2 and gravel 3. Insert iron bars of Ø10 at every interval of 300 mm. The edge of the concrete base should be planed.

Important information regarding the refrigerant used

This product is factory charged with N2.

The refrigerant system will be charged with fluorinated greenhouse gases covered by the Kyoto Protocol. Do not vent gases into the atmosphere.

Refrigerant type: R407C
GWP[1] value: 1652.5

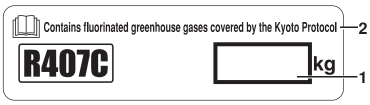
[1] GWP = global warming potential

Please fill in with indelible ink,

- the total refrigerant charge

on the refrigerant charge label supplied with the product.

The filled out label must be adhered in the proximity of the product charging port (e.g. onto the inside of the service cover).



1 total refrigerant charge
2 Contains fluorinated greenhouse gases covered by the Kyoto Protocol

Refrigerant circuit

Sizing and installation of the refrigerant circuit

Installation of the refrigerant circuit should be done by a licensed technician and must comply with all relevant European and national regulations.

In order to minimize capacity loss, it is recommended to size the lines in such a way that the pressure drop of each line does not result in an evaporating temperature decrease of more than 1°C.

For this purpose we recommend that the equivalent length of the line should not exceed the following criteria:

Liquid piping: equivalent length (m)

	ERAP110	ERAP150	ERAP170
7/8"	34	17	13
1"	50	34	25
1-1/8"	100	100	50

Suction piping: equivalent length (m)

	ERAP110	ERAP150	ERAP170
2-1/8"	25	17	13
2-1/2"	50	34	25
2-5/8"	100	50	34

Equivalent length=measured length of the piping+Axnumber of elbows.
A=0.5/m elbow for liquid piping
A=1.5/m elbow for suction piping

NOTE To assure oil return to the compressor do not use piping size above 2-1/8" for ERAP110 units or above 2-5/8" for ERAP150 and ERAP170 units for suction in the upward direction! If necessary, use double suction riser constructions.

NOTE Make sure to install a sightglass in the liquid line as close as possible to the expansion device of the evaporator.

Connecting the unit to the refrigerant circuit

Cut the spinned tube pipes (a nitrogen holding charge will escape) and connect immediately to the refrigerant circuit. Start vacuuming immediately after connection.

Never leave the condensing unit 'open' for longer time since the compressor oil is highly hygroscopic and will contaminate immediately when exposed to air!

Open the liquid stop valve, discharge stop valve and suction valve (if provided). Vacuum the unit and perform a leak test.

Charging the unit

1 Perform an integral pre-start inspection like explained in chapter "Before starting" on page 5.

> Carefully perform all required procedures like explained in chapters from which is referred to in chapter "Before starting", **but do not start the unit**.

It is also necessary to read the operation manual delivered with the unit. This will contribute to understand the operation of the unit and its electronic controller.

Pre-charge of refrigerant without operation of the unit

2 Calculate the refrigerant pre-charge according to table below:

Refrigerant charge [kg]=①+②xm^{FL}+③xm^{FS}+④x0.5

①	ERAP110	ERAP150	ERAP170
kg	31	32	32
②	kg/m	③	kg/m
7/8"	0.33	2-1/8"	0.040
1"	0.45	2-1/2"	0.056
1-1/8"	0.58	2-5/8"	0.061

② = refrigerant weight per meter field liquid line (kg/m)
③ = refrigerant weight per meter field suction line (kg/m)
m^{FS} = total length of the field suction line (m)
m^{FL} = total length of the field liquid line (m)
④ = refrigerant volume of the field evaporator (dm^3)

3 Use the 3/8” stop valve on the filter drier to pre-charge the unit with the complete calculated pre-charge.
Do not operate the compressor for pre-charging, this to avoid compressor damage!

4 After completion of procedure step 3, perform an “initial start” test:

4.1 Start the compressor and wait for the compressor to go through the star/delta.
Carefully check during start-up:

- that compressor is not producing any abnormal noise or vibration;
- that high pressure rises and low pressure drops within 10 seconds after start to evaluate if the compressor is not operating in reverse due to wrong wiring;
- that no safeties are activated.

4.2 Stop the compressor after 10 seconds.

Fine-tuning of refrigerant charge while unit is in operation

5 Use the 3/8” valve on the suction side of the compressor for fine-tuning of the refrigerant charge and make sure to charge the refrigerant in its liquid state.

5.1 For fine-tuning of the refrigerant charge, the compressor must operate at full load (100%).

5.2 Verify the superheat and subcooling:

- superheat must be between 3 and 8 K
- subcooling must be between 3 and 8 K

5.3 Verify the oil sightglass. Level must be within the sightglass.

5.4 Verify the liquid-line sightglass. It should be sealed and not indicate moisture in the refrigerant.

5.5 As long as the liquid-line sightglass is not sealed, add refrigerant in steps of 1 kg and wait until the unit runs in stable conditions.
Repeat the complete procedure step 5 until the liquid-line sightglass is sealed.
The unit must have the time to stabelize which means that this charging has to be done in a smooth way.

6 Note down the superheat and subcooling for future reference.

7 Fill out the total refrigerant charge on the unit nameplate and on the refrigerant charge label supplied with the product.

FIELD WIRING

NOTE All field wiring and components must be installed by a licensed electrician and must comply with relevant European and national regulations.

The field wiring must be carried out in accordance with the wiring diagram supplied with the unit and the instructions given below.

Be sure to use a dedicated power circuit. Never use a power supply shared by another appliance.

NOTE Verify on the wiring diagram all electrical actions mentioned above, in order to understand the operation of the unit more deeply.

Parts table

F1,2,3U .... Main fuses for the unit
H1P .... Indication lamp general operation
H2P .... Indication lamp alarm
H3P .... Indication lamp operation circuit
L1,2,3 .... Main terminals
PE .... Main earth terminal
S6S .... Changeable input 1
S9L......................... Contact that closes if the fan or pump is working
S10S .... Changeable input 2
S11S .... Changeable input 3
S12S .... Changeable input 4
S13S .... Main isolator switch
- - - .... Field wiring

Power circuit and cable requirements

1 The electrical power supply to the unit should be arranged so that it can be switched on or off independently of the electrical supply to other items of the plant and equipment in general.

2 A power circuit must be provided for connection of the unit. This circuit must be protected with the required safety devices, i.e. a circuit breaker, a slow blow fuse on each phase and an earth leak detector. Recommended fuses are mentioned on the wiring diagram supplied with the unit.

Switch off the main isolator switch before making any connections (switch off the circuit breaker, remove or switch off the fuses).

Connection of the air-cooled condensing unit power supply

1 Using the appropriate cable, connect the power circuit to the L1, L2 and L3 terminals of the unit.

In case the option "main isolator switch" is installed on the unit, the power circuit must be connected to the terminals 2, 4 and 6 of the main isolator switch.

2 Connect the earth conductor (yellow/green) to the earthing terminal PE.

Installation of the thermostat sensor (R4T)

The thermostat sensor is provided with a cable length of 12 m and can be found rolled up in the switchbox.

- In case of a water cooled evaporator, this sensor can be mounted in a sensor holder on the evaporator.
- In case of an air handling unit, this sensor can be mounted in a sensor holder in the air cooled evaporator water circuit.

Refer also to "Annex I" on page 7 for unit setup examples.

Interconnection cables

- Be sure to interlock so, that the compressor will not come into operation unless the fan is operated. For this purpose 2 spare terminals are provided in the switch box. Refer to the wiring diagram supplied with the unit.
- Voltage free contacts
  The controller is provided with some voltage free contacts to indicate the status of the unit. These voltage free contacts can be wired as described on the wiring diagram. The maximum allowable current is 4 A.
- Remote inputs
  Besides the voltage free contacts, there are also possibilities to install remote inputs. They can be installed as shown on the wiring diagram.

Cable for remote digital controller (See remote digital controller in the operation manual)

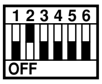
1 A remote digital controller can be connected to the PCB inside the unit by means of a 6-ray cable and a connector located on the rear side of the remote digital controller in case you prefer to operate the unit from a distance. You are allowed to use a cable of up to 600 metres. Specifications of the cable: 6-ray telephone cable with a maximum cable resistance of 0.1 Ω/m.

2 If you operate the digital controller from a distance with a cable as specified above, close the hole in the switch box cover with the supplied polycarbonate plate.

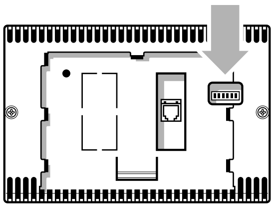
Setting the adresses on the remote digital controller

When a remote digital controller is used, the adress has to be set by means of DIP-switches according to the drawing below:

Remote digital controller address



Where to find the DIP-switches of the remote digital controller



To avoid damage to the controllers liquid crystals during winter time, do not shut off the main power supply.

BEFORE STARTING

NOTE After connecting the unit to the evaporating air unit, the unit should not be started, not even for a very short period of time, before the following pre-commissioning checklist is filled out completely.

tick ✓ when checked		standard steps to go through before starting the unit
☐	1	Check for **external damage**.
☐	2	Open all **shut-off valves** indicated by a red label: "OPEN THIS VALVE BEFORE OPERATION". (Open the liquid line, discharge and suction (if provided) stop valves completely.)
☐	3	Install **main fuses, earth leak detector** and **mainswitch**. Recommended fuses: aM according to IEC standard 269-2. *Refer to the wiring diagram for size*.
☐	4	Supply the main voltage and check if it is within the allowable ±10% limits of the nameplate rating. The electrical main **power supply** should be arranged so, that it can be switched on or off independently of the electrical supply to other items of the plant and equipment in general. *Refer to the wiring diagram, terminals L1, L2 and L3*.
☐	5	Connect the air- or waterflow contact, so that the unit can only come in operation when the fan or pump is running and the air-waterflow is sufficient.
☐	6	Check the **oil level** in the compressors.
☐	7	Connect the optional field wiring for **remote indication**.

NOTE

- It is necessary to read the operation manual delivered with the unit before operating the unit. It will contribute to understand the operation of the unit and its electronic controller.
- Close all switch box doors after installation of the unit.

I do confirm having executed and checked all the above mentioned items.

Date **Sign**

Keep for future reference.

CUSTOMIZATION IN THE SERVICE MENU

All customized settings must be done by a licensed technician.

To change a setting in the service menu:

1 Enter the usersettings menu as indicated in the operation manual and press the ▼ key to go to the last screen to enter the service menu (this is only possible if the unit is off).

2 Enter the correct password using the ▼ and ▲ keys. The password can be found in the service manual.

3 Press ↵ to confirm the password and enter the service menu.

4 Go to the screen which contains the parameter to be modified by using the ▼ and ▲ keys.

5 Position the cursor behind the parameter to be modified using the ↵ key.

6 Select the appropriate setting using the ▼ and ▲ keys.

7 Press ↵ to confirm the modification. When the modification has been confirmed, the cursor switches to the next parameter which can now be configured.

8 Place the cursor in the top left corner of the screen when you are finished changing the parameters on this screen.

9 Repeat from instruction 4 onwards to modify other parameters.

Setting of the minimum temperature

It is possible to change the minimum allowed temperature (MIN.OUTWATER) in the service menu.

In case of a water cooled evaporator:

- Make sure that sufficient glycol is added to the water system according to the table.
- Make sure that the low pressure safety is lowered according to the table.

	minimum outlet water (MIN.OUTWATER)			
	2°C	0°C	–5°C	–10°C
Weight of ethylene glycol (%)	10	20	30	40
Weight of propylene glycol (%)	15	25	35	40
Low pressure setting (bar)	1.3	1.1	0.6	0.2

Improper setting of the minimum outlet water temperature can result in severe damage of the equipment.

Setting the password for safety reset

To avoid resetting of safeties by unqualified persons, the user password is asked by default when resetting a safety.

This password however can be changed to SERVICE PASSWORD or to NONE.

NOTE Since inadequate resetting of safeties can damage the machine, it is advised to keep the default setting of USER PASSWORD.

Defining of the changeable digital inputs and outputs

Besides locked digital inputs and outputs there are a number of changeable digital inputs and outputs of which the function can be chosen from several possibilities.

Possible functions for changeable digital inputs are:

- NONE: no function is appointed to the changeable digital input.
- STATUS: no function is appointed to the changeable digital input, but the input status can be read in the "input/output" menu.
- REMOTE ON/OFF: to remotely switch the unit on or off.
- DUAL SETPOINT: to switch between setpoints.
- CAP. LIM. 1/2/3/4: to limit the capacity of the unit to the entered values.

Possible functions for the changeable digital output are:

- NONE (OPEN): no function is appointed to the changeable digital output.
- 1 (CLOSED): no function is appointed to the changeable digital output, but the output is closed.
- 2ND EVAP PUMP: can be used to steer a second evaporator pump.
- 100% CAPACITY: indicates when the unit is working at 100%.

Possible configurations for the changeable analog input are:

- NONE: no function is appointed to the changeable analog input.
- SETP.SIGN. 0/1V:
- SETP.SIGN. 0/10V:
- SETP.SIGN.0/20mA:
- SETP.SIGN.4/20mA:

This allows the user to define a setpoint in function of an analog input as mentioned above. Refer to "Defining the setpoint signal setting" on page 6.

Defining the setpoint signal setting

The setpoint signal is used to change the setpoint by an external analog input signal on the unit.

Example

in setpoints menu

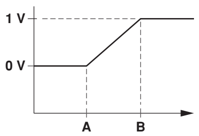
```
→ >

  SETPOINT 1:  07.0°C
  SETPOINT 2:  07.0°C
```

in service menu

```
  _÷ CHANG.INP/OUTPUTS
→ AI1:SETP.SIGN: 0/1V
→ MAX SETP.DIF: 5.0°C
```

Remark: MAX SETP.DIFF is only available when input SETP.SIGN (0/1V, 0/10V, 0/20mA or 4/20mA) is selected.



Result		Display in readout menu
A	at 0 V → 12.0°C	SETPOINT 1: 12.0°C
B	at 1 V → 12.0°C + 5.0°C = 17.0°C	SETPOINT 2: 17.0°C

Steering the fan/pump manually

There is the possibility to turn the fan/pump on or off manually. This means that when the unit is off, the fan/pump can also be turned on at any time to check the pump.

Defining the BMS settings

The BMS parameters allowing communication between the unit and the supervisory system can be modified with the BMS SETTINGS and the BMSBOARD SETTINGS screen of the service menu. The BMS parameters are:

BMS SETTINGS screen:

- BMS CONTROL ALLOWED: if set to Y (yes), the unit can be commanded and configured from a supervisory system. If set to N (no), the supervisory system can only read out values but cannot modify them.
- BMS ADDR.PCB: used to address the PCB.
- PROTOCOL: indicates the communication protocol. If the optional gateway is used to connect the units to a supervisory system, the protocol is CAREL.

BMSBOARD SETTINGS screen:

- SER. BOARD: indicates the type of serial connection. The default is set to RS485.
- BAUD RATE: indicates the speed of communication. The default setting of 19200 bps must be used when the optional gateway is connected.

Defining the thermostat settings

Defining the thermostat settings for inlet and outlet water temperature of a, b and c can only be set in the service menu.

```
_÷STEPL SERVICE MENU

A:0.8 B:0.5 C:0.2°C
INLDIFF:0.5°C
```

To define the thermostat settings of the inlet and outlet water temperature.

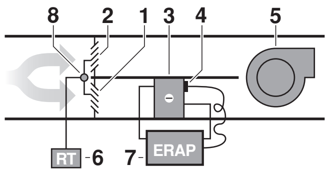
How to continue

After installation and connection of the packaged air-cooled condensing unit, the complete system should be checked and tested as described in "Checks before initial start-up" in the operation manual supplied with the unit.

Fill out the brief operation instructions form and fix it visibly near the operating site of the refrigeration system.

ANNEX I

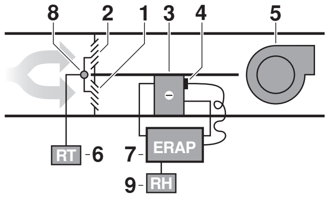
- Connection to an air handling installation with face and bypass register for control of the air temperature.



1	Face register
2	Bypass register
3	Air cooled evaporator
4	Thermostat sensor (R4T)
5	Fan
6	Room thermostat (RT)
7	ERAP unit
8	Servo motor for face/bypass registers

The thermostat sensor (R4T) delivered with the ERAP unit is to be mounted in a holder on the air cooled evaporator.
The ERAP unit will keep the cooling battery temperature to a constant value.
A field supplied room thermostat (RT) is controlling the face and bypass registers for control of the air temperature.

- Connection to an air handling installation with face and bypass register for control of the air temperature and the relative humidity.



1	Face register
2	Bypass register
3	Air cooled evaporator
4	Thermostat sensor (R4T)
5	Fan
6	Room thermostat (RT)
7	ERAP unit
8	Servo motor for face/bypass registers
9	Relative humidity sensor (RH)

The thermostat sensor (R4T) delivered with the ERAP unit is to be mounted in a holder on the air cooled evaporator.
The setpoint for the temperature of the cooling battery will change depending on the relative humidity in the room. For this purpose, a relative humidity sensor (RH) with a 4~20 mA or 0~10 V output is connected to the ERAP unit. The setpoint is programmed in function of the relative humidity. (See also "Defining the setpoint signal setting" on page 6.)
A room thermostat (RT) is controlling the face and bypass registers for control of the air temperature.

NOTES

BRIEF OPERATION INSTRUCTIONS
ERAP-MBYNN Air-cooled condensing units

Equipment supplier :	**Service department** :
....	....
....	....
....	....
Phone :	**Phone** : ....

EQUIPMENT TECHNICAL DATA

Manufacturer	: DAIKIN EUROPE	Power supply (V/Ph/Hz/A)	:..
Model	:	Maximum high pressure	:..............................29 bar
Serial Number	:	Charging weight (kg) R407C	:..
Year of construction	:		

START-UP AND SHUT DOWN

➤ Start-up by switching on the circuit breaker of the power circuit. The operation of the water chiller is then controlled by the Digital Display Controller.

➤ Shut-down by switching off the controller and the circuit breaker of the power circuit.

WARNINGS

Emergency shut down : Switch off the **circuit breaker** located on ....
....
....

Air inlet and outlet : Always keep the air inlet and outlet free to obtain the maximum cooling capacity and to prevent damage to the installation.

Refrigerant charge : Use refrigerant R407C only.

First aid : In case of injuries or accidents immediately inform:

➤ **Company management** : **Phone** ....

➤ **Emergency physician** : **Phone** ....

➤ **Fire service** : **Phone** ....

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4PW22680-1E